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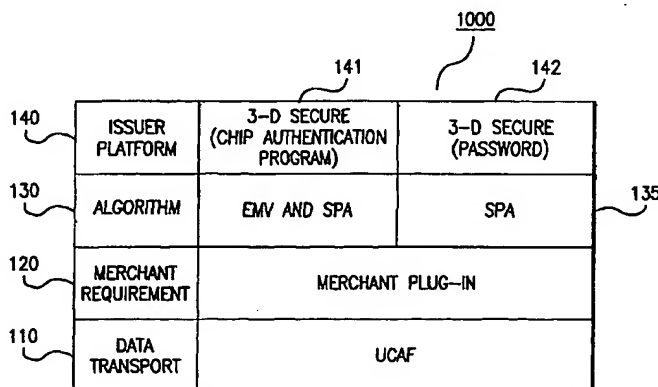
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(54) Title: SYSTEMS AND METHODS FOR CONDUCTING SECURE PAYMENT TRANSACTIONS USING A FORMATTED DATA STRUCTURE



(57) Abstract: A formatted data structure is provided for conveying the results of ecommerce authentication programs that are used to authenticate a cardholder's on-line transactions. The data structure, which has at most a 20-byte length, is designed to be compatible with 3-D Secure message protocols used in e-commerce. The data structure includes designated fields that include a hash of the merchant's name, identify an authentication service provider, identify the authentication method used, and include a merchant authentication code which ties cardholder information to the transaction. Secure payment algorithms are provided for use by the e-commerce authentication programs to generate authentication results in the desired format. In one secure payment algorithm, a secret key is used to encrypt a concatenation of a cardholder account number with information from designated fields of the data structure. In another secure payment algorithm, a pair of secret keys is used to encrypt a concatenation of the cardholder's account number, card expiration date and service code. In both cases, portions of the encryption results are used to define the merchant authentication code.

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B. FIELDS SEARCHED

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2001/0032154 A1 (SCHUMMER) 18 October 2001 (18.10.2001), entire document.	1-22
A	US 2002/0194138 A1 (DOMINGUEZ et al) 19 December 2002 (19.12.2002), entire document.	1-22
A,P	US 2003/0212642 A1 (WELLER et al) 13 November 2003 (13.11.2003), entire document.	1-22

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